EXECUTIVE SUMMARY

DESTINATION 2025

The Destination 2025 vision captures the future we strive toward – a transformation of the Nation's aviation system. Air traffic will move swiftly, efficiently, and seamlessly around the globe. Flights will take off and land on time, every time, without delay and there will be no fatal accidents. Air travel will be routine and uneventful for everyone involved: passengers, crews, ground support, and communities. Costs will be contained for both operators and passengers, and there will be no negative impact to the environment. Manned and unmanned flights will each achieve safe flight, as will commercial launches to space. This is a vision that captures the future we will strive to achieve – to transform the Nation's aviation system by 2025.

The Federal Aviation Administration's mission is to provide the safest, most efficient aviation system in the world. What sets us apart is the size and complexity of our infrastructure, the diversity of our user groups, our commitment to safety and excellence, and our history of innovation and leadership in the world's aviation community. Now we are working to develop new systems and to support a culture that increases the safety, reliability, efficiency, capacity, and environmental performance of our aviation system. To meet our vision will require enhanced skills, technology, equipment, and system oversight and management.

Our primary focus in the past was increasing the safety of the aviation system and providing the necessary capacity. We've been very successful. Since the mid-90s, the number of commercial air carrier accidents has decreased nearly 80 percent. Since 2000, new runways have opened at 16 large and medium hub airports, providing these airports with the potential to accommodate more than 2 million annual operations. We have enhanced our own performance, putting in place internal financial systems and processes that have helped us account for and save taxpayers' money. We have also helped shape the growth of the global aviation system and the access and opportunity afforded U.S. citizens. Yet, there is still more to be done.

Building on this solid foundation, the FAA is heading into a time of unprecedented challenge as it works to adapt to a rapidly changing aviation system in the presence of changing economic, social, and environmental and energy needs of both our nation and our global partners. Like the rest of the federal government, the FAA faces significant budget pressures that will shape our ability to maintain today's system as well as respond to tomorrow's demands. The FAA must see opportunities within these challenges that will enable aviation to be a transportation choice that provides the traveling public, U.S. business, and our global partners with safe, secure, convenient, reliable, affordable and environmentally sustainable air travel. Our vehicle for providing opportunities during this transformation is the Next Generation Air Transportation System (NextGen).

NextGen is a series of inter-linked programs, systems, and policies that implement advanced technologies and capabilities to dramatically change the way the current aviation system is operated. NextGen is satellite-based and relies on a network to share information and digital communications so all users of the system are aware of other users' locations. It will make U. S. aviation safer, reduce delays, and mitigate impacts on the environment. The system responds quickly as the types of aircraft change and congestion occurs. Hazards are identified and their associated risk mitigated before they result in incidents or accidents. NextGen combines changes to the way aircraft are routed, with new technology and improved fuels to reduce aviation's environmental "footprint." NextGen also must extend beyond our domestic airspace and be an integral part of the global aviation system. This will require partnership and collaboration within the FAA, across government, with industry, both domestic and international, and with the International Civil Aviation Organization (ICAO) and its contracting states.

The next 15 years promise to be a pivotal time in the history of air transportation, as the face of aviation is transformed around the world. This is occurring even as we face challenging budget pressures that will shape every aspect of FAA's operations, plans, and workforce. Key components of NextGen programs are already improving access to airports during inclement weather and are providing tangible improvements for passengers and aviation stakeholders today. Setting metrics at 2018 provides us with a mid-way checkpoint for measuring our progress towards achieving our goals. From flight decks to control towers, our system is already changing. The FAA is committed to ensuring America has the safest, most advanced and efficient, and sustainable aviation system in the world. We must work to make air transportation safe and efficient wherever U.S. citizens travel. Our aspiration is:

Move to the Next Level of Safety: Safety is FAA's top priority. We will transform the way we assure safety by fostering a positive safety culture to enhance our standards and oversight. We will take action to manage risk by identifying hazards and risk based on continuous analysis of data.

Create Our Workplace of the Future: We can only create the future we envision through the people of the FAA. NextGen will require not only new technology and tools, but a skilled and dedicated workforce. Our continued success depends on creating a workplace of choice with integrity, fairness, diversity, and innovation as our professional hallmarks. We will train and enable our high performance workforce with the skills and abilities required to reach and sustain the NextGen levels of safety, efficiency and sustainability.

Deliver Aviation Access through Innovation: We must serve the needs of the traveling public and the aviation industry to provide unencumbered access to the aviation system, whether the destination is domestic or international. We will enhance aviation's value to the public by improving travel throughout the National Airspace System, and beyond. This includes reducing costs and energy use, minimizing delays, preserving and securing needed infrastructure, and matching capacity to increase the economic effectiveness of aviation.

Sustain Our Future: We will grow aviation in an environmentally and energy responsible manner. We will minimize noise and emission impacts on communities, reduce aviation's carbon footprint, invest in new technology, foster sustainable alternative fuels research, and other innovations that promote eco-friendly solutions.

Advance Global Collaboration: We will work with ICAO and other international partners to improve global aviation safety and environmental performance around the world. We will encourage innovation while we work with our international partners to deploy seamless and efficient global air navigation through interoperable standards, procedures, technologies, and harmonization of certification and regulation

Next Level of Safety

Our Goal: By achieving the lowest possible accident rate and always improving safety, all users of our aviation system can arrive safely at their destinations. We will advance aviation safety worldwide.

OUTCOMES

- Strive to eliminate fatalities on commercial service aircraft in the U.S.
- Reduce aviation risk through all phases of flight (gate-to-gate).
- Reduce the general aviation fatal accident rate.
- No fatalities from commercial space launches.

CHALLENGES

A forward-looking approach is needed to analyze trends, data, and systems to manage risk before it leads to a future incident or accident. The Agency's current processes and systems have created a safe and efficient aviation system. To achieve the next level of safety, the traditional methods of analyzing the causes of an accident or incident after the fact are not enough. The FAA will anticipate potential sources of risk to identify and remove accident precursors and contributors, and strategically manage safety resources for maximum safety improvement in a cost effective manner.

A major challenge is integrating human factors with NextGen technology and procedures to ensure safety. Identifying the human factor aspects of risk and proactive solutions provide opportunity for moving forward for additional improvements in aviation safety and continues to provide quantitative data to support human factor elements of aviation safety. We must work with domestic and global stakeholders to stimulate cooperation for the open reporting of safety concerns and collaboration of data. NextGen will increase situational awareness in the flight deck and on the ground, and must support access to the system. We must work with domestic and international stakeholders to stimulate cooperation for the open reporting of safety concerns.

Streamlining FAA's certification, operational approval, and procedure design processes will be essential for timely implementation. Sustaining a high level of involvement and collaboration with stakeholders, including operators, will also is necessary to ensure progress.

As we move into the future, Safety Management Systems (SMS) are essential to manage risk in the aviation system. FAA must be a leader in the design and implementation of SMS. Technical challenges abound, including the ability to analyze massive amounts of data to provide useful information for oversight and assessment of risk. The FAA must

continue to promote public confidence in the aviation safety system through use of SMS and effective oversight of the development and introduction of new commercial aviation products. Also, FAA must meet the challenge of fostering commitment and best safety practices that sustains or improves the level of safety across the globe.

STRATEGIES

- Use NextGen technologies to continually target key risk areas.
- Strengthen and improve technology, infrastructure, training, procedures, evaluation, analysis, testing, and certification to reduce the risk of accidents from all causes in all phases of operation; no degradation of safety as new NextGen technologies or operations are introduced.
- Incorporate SMS principles into all FAA/industry operations.
- Promote and expand safety information sharing efforts and safety practices, including better of use of safety data mining to focus and prioritize safety efforts through enhanced capabilities for identification, analysis, and mitigation development of incidents, accidents and other safety related data, i.e., reports from users to address hazards before they lead to accidents.
- Develop appropriate tools, metrics, and approaches to reduce and limit the serious losses of standard separation within the National Airspace System.
- Develop tools, guidance, and regulations for reducing the safety risks for commercial space launch and reentry operations, including those involving human space flight.

PERFORMANCE METRICS (2018)

- Reduce the commercial air carrier fatalities per 100 million persons on board by 24 percent over 9-year period (2010-2018). No more than 6.2 in 2018.
- Maintain the rate of serious runway incursions at or below 20 per 1000 events.
- Achieve safety information analysis being practiced by 100% of all Part 121 air carrier operations by 2018.
- Reduce general aviation fatality rate to less than 1 fatality per 100,000 flight hours by 2018.
- Maintain zero fatalities, serious injuries, or significant property damage, while enabling increased commercial spaceflight activity.

WORKPLACE of Choice

Our goal: We will create a workplace of choice marked by integrity, fairness, diversity, accountability, and innovation. Our workforce will have the skills, abilities, and support systems required to achieve and sustain NextGen.

OUTCOMES

- FAA has the right people with the right skills in the right position at the right time to achieve our goals.
- FAA is widely recognized as the workplace of choice.
- FAA workforce reflects the diversity of the nation.
- FAA provides the safest and most secure facilities in which our employees and equipment operate.

CHALLENGES

FAA must integrate and coordinate activities across multiple lines of business and develop plans and programs to implement NextGen capabilities. In line with the FAA value, "People are our strength," we must provide appropriate training, tools, and opportunities to our workforce, while positively transforming ourselves and the work environment of the future FAA. We will need to win the competition for talent by providing an attractive and challenging place to work.

We are moving from a cognitive based aviation control system to a system with automated support for decisions, which will require a collaborative work environment. This has never been done before. We face the challenge of working in a more cross-organizational and cross-functional manner while meeting an aggressive NextGen implementation schedule. This challenge will be especially important as we hire, develop, and retain talented employees.

As the complexity of systems and supplier networks increases, we must continue our shift to systemic oversight of organizations' SMS, rather than focus on individual services and products. This will change the needs, roles, and skill sets of our workforce. We need to strengthen our pipeline of candidates to fill new positions, including diversity throughout all levels of leadership.

We must train our current employees in critical skills, and attract employees with the right skill sets, while supporting the transfer of knowledge as people retire. We must

promote employee development and reward innovation. We must ensure that our workforce is supported by exceptional secure information services, financial management, contracting, procurement, human resource functions and facilities. Finally, the President has proposed a five-year freeze on non-security discretionary spending. Not only will budget constraints require FAA to continue to manage its resources effectively but oblige us to be creative and innovative in managing resources to achieve our goals and support our people. Improving operational efficiencies and program management will become critical to supporting future budget requests.

STRATEGIES

- Create effective recruitment and talent management strategies to attract, retain, and develop a highly skilled and diverse pool of employees and management.
- Ensure the workforce has all the training, tools, secure systems, safe facilities, development opportunities, and financial accountability needed to meet NextGen transformation.
- Leverage use of social networking tools to inform, engage, and solicit employee views and innovative solutions.
- Improve access to more environmentally-friendly transportation and workplace alternatives to the benefit of communities and future generations.
- Provide managers with the tools needed to ensure collaborative leadership through training and development, mentoring/coaching, and opportunities to learn best practices from other organizations.

PERFORMANCE METRICS (2018)

- The FAA is rated in the top quartile of places to work in the federal government by employees.
- The FAA is rated in the top quartile of federal agencies for financial accountability, program management, diversity, human resources management, procurement, OSHA performance, and contracting and information services by outside agencies.

Delivering Aviation Access through Innovation

Our Goal: Enhance the flying experience of the traveling public by improved access to and increased capacity of the nation's aviation system. Ensure capacity is more efficient, predictable, cost-effective and matched to public needs.

OUTCOMES

- System capacity and user demands are matched to ensure reliable, predictable and cost-effective air navigation and airport services.
- Maintain system capacity and predictability during adverse weather.
- Air navigation infrastructure and associated systems are flexible, reliable, cost effective and secure.
- NextGen capabilities are fully implemented and utilized in how U.S. aviation community system needs are met.
- Safety, funding, airport infrastructure and environmental issues are advanced and leveraged by full utilization of NextGen capabilities

CHALLENGES

One of our most complex challenges today is meeting the expectations for all system users for their operational needs, increasing capacity, efficiency and predictability, while enhancing safety, mitigating environmental impacts and operating in a seamless global environment. NextGen policies, technologies, and procedures are necessary to address flexibility for airspace uses, environmental and safety issues, and match demand and capacity to mitigate congestion. Achieving all these, sometimes conflicting aims, will be a challenge.

NextGen requires significant commitments within the Government, as well as from aviation stakeholders. This includes commitments for operational changes, investment in technology and training, environmental and safety performance, equipage of aircraft and certification of crew at required performance levels. In some cases, airports will need to invest in new infrastructure while maintaining and preserving current infrastructure. Challenges include how to fund the necessary projects in a tight budgetary climate, change the culture of the system, have seamless operability with foreign nations, and manage transition of the system during a period with varying levels of equipage.

Changes in the operational environment will also include the introduction of new vehicles, such as unmanned aircraft systems and commercial space vehicles. These aircraft pose significant new challenges which must be addressed by certification and development of operational procedures, along with supporting policies.

STRATEGIES

- Use NextGen technologies and operational improvements to reduce the average time it actually takes to go from one core airport to another.
- Maximize delivery of early NextGen user benefits to generate support for an aggressive NextGen implementation schedule.
- Increase effective throughput in the National Airspace System by implementing NextGen and policies to facilitate balance between capacity and demand at core airports.
- Increase the flexibility of the National Airspace System to enable users to adapt according to their own needs by implementing NextGen.
- Implement automated NextGen architecture systems that provide secure, timely, and accurate information for all system users.
- Ensure federal resources such as Airport Improvement Programs, have sufficient programmatic flexibility to invest in NextGen capacity projects that benefit the airport system.
- Identify and implement procedures and technology to improve weather information and reduce weather delays.

PEFORMANCE METRICS (2018)

- Optimize airspace and Performance Based Navigation (PBN) procedures to improve efficiency an average of 10% across core airports by 2018
- Reduce means and variances of average time it takes to go from one core airport to another affecting at least 90% of passengers
- Meet 90% of all NextGen acquisition milestones on schedule and at or below original budget.
- Reduce air traffic delays caused by adverse weather by 50% in 2018.
- Improve throughput at core airports during adverse weather by 14% by 2018.
- Localizer Performance with Vertical Guidance (LPV) procedures available at 50% of identified general aviation airports by 2018.

Sustaining our Future

Our goal: To develop and operate an aviation system that reduces aviation's environmental and energy impacts to a level that does not constrain growth and is a model for sustainability.

OUTCOMES

- U.S. aviation sector is a model for sustainable growth.
- Community noise concerns are not a significant constraint on growth.
- Aviation emissions do not contribute to significant adverse health impacts.
- Aviation's carbon footprint does not become a constraint to growth.
- Aviation operations have no significant adverse effect on water and air quality.

CHALLENGES

Aviation has made significant strides in the last few decades in reducing its environmental impacts. Despite this progress, a compelling need remains for management and reduction of environmental impacts. Aircraft noise can significantly impact people on or near airports and under flight paths. The impact of noise continues to be a challenge to aviation growth and operating flexibility. A significant number of major U.S. airports are located in areas with substandard air quality. There is an increasing focus on climate change, and aviation's contribution to greenhouse gas emissions is projected to grow, spurring recommendations for national and international action. High fuel prices, energy supply and security all contribute to rising energy issues. Finally, aviation activity adversely affects water quality with airport storm water, aircraft and pavement deicing, aircraft fueling and maintenance, and airport construction.

FAA's own facilities and infrastructure face significant challenges to meet goals in energy and environmental performance. Without the necessary investment and rationalization, it will prove difficult to achieve sustainability goals. In the general aviation world, the lack of a safe alternative to leaded aviation gas creates a significant long-term threat to operations of a large segment of U.S. general aviation. In the commercial aviation world, solutions often involve trade-offs, as quieter and more fuel efficient airframes and engines may produce more air quality pollutants. Taking full advantage of NextGen capabilities will require airspace changes and environmental reviews that can be costly and controversial. Internationally there is a wide diversity of views on the relative priority and appropriate response to a number of environmental concerns that could make it difficult to reach a consensus on a path forward. Finally, creating solutions will require federal and private investment, both far from certain given the budget pressures and economic uncertainties.

STRATEGIES

- Improve scientific knowledge of environmental impacts and develop effective decision support tools.
- Accelerate NextGen technology and operational improvements to reduce noise, fuel burn and emissions despite growth.
- Foster research and development to accelerate advances in engine, airframe, and other appropriate technologies.
- Increase the development and use of sustainable alternative aviation fuels.
- Develop appropriate policy approaches and economic incentives to foster an integrated approach to planning, decision-making, regulatory compliance, and environmental cost-benefits of operating the NextGen system
- Ensure aviation stakeholders address environmental sustainability in their planning and operations.

PERFORMANCE METRICS (2018)

- The U.S. population exposed to significant aircraft noise around airports has been reduced to less than 300,000 persons.
- Aviation emissions contribute 50% less to significant health impacts and are on a trajectory for carbon neutral growth by 2018 using a 2005 baseline.
- One billion gallons of renewable jet fuel is used by aviation by 2018.
- A “drop-in” replacement fuel for leaded aviation gasoline is available by 2018 that is usable by most general aviation aircraft.

Improved Global Performance through Collaboration

Our goal: Achieve enhanced safety, efficiency, and sustainability of aviation around the world. Provide leadership in collaborative standard setting and creation of a seamless global aviation system.

OUTCOMES

- Reduce aviation accidents and fatalities worldwide.
- Provide effective global air navigation capacity.
- Reduce aviation's environmental footprint internationally.
- Achieve seamless operations integrating advanced technologies and capabilities through harmonized air navigation approaches.

CHALLENGES

Seamless global air transport across borders with consistent levels of safety, efficiency, and sustainability is the ultimate goal of international air transportation. However, each country and region has unique requirements and resource challenges that can often frustrate global airspace planning and development, safety collaboration, and sustainability efforts. To achieve global success, we will face significant challenges addressing competing priorities around the world.

In the short, medium and long terms, the capacities of some States to address meaningfully safety, efficiency, and sustainability matters will vary based on competing domestic priorities. As a result, abilities to devote sufficient resources will vary, even as air transport represents an important generator of economic activity. A central challenge, therefore, will be to identify means to assist international partners in meeting critical needs to build capabilities in order to participate in the seamless global system.

In the long term, global demographic and economic developments point to increased air transport activity among several large emerging economies in Asia, the Middle East, and Latin America. While U.S. air transport activity will continue to grow, it will represent a smaller share of overall global activity due to growth in these regions. Several countries in these regions will see their operations and manufacturing capabilities continue to develop, in step with significant economic expansion, as well as their influence grow in regional and global venues, including the International Civil Aviation Organization (ICAO). To maintain or heighten the role of the United States in the development of a high-performance global system over the long term, we must meet the challenge of investing in relationships with our emerging international partners now so as to have a strong foundation from which to act in the future.

Equally important will be the challenge of strengthening our bonds with well-established partners in Europe, North America, and the Pacific. Short-term competitive or policy differences—for example, over air traffic management harmonization or environmental measures—may sometimes distract from shared, long-range visions of a safe, efficient, sustainable global aviation system. The challenge will be to reconcile those short-term differences and shared long-term visions while accommodating the increasing role of our fast-growing, emerging partners.

STRATEGIES

- Enhance international cooperation and harmonization in legislation, regulatory requirements, policies, and procedures in civil aviation safety, air navigation, and environmental mitigation.
- Incorporate early in FAA processes international considerations in the implementation of new technology and standards.
- Increase collaborative research, flight trials, and extended demonstrations that support improvements to safety, efficiency, and environmental performance.
- Secure sources of international funding to support regional aviation safety initiatives, aviation infrastructure upgrades, and development of sustainable alternative fuels.
- Continue to provide high-performance, effective safety regulation and air navigation services from which emerging aviation leaders from international partners around the world want to learn.

PERFORMANCE METRICS (2018)

- World aviation accident rate declines 10% compared to 2010.
- 40% of all commercial aircraft from the top 25 aviation states (based on revenue ton miles) are using fully interoperable NextGen technologies and capabilities by 2018.
- Improve NAS energy efficiency (fuel burned per miles flown) by at least 2% annually.